Utah's New Accountability and Assessment Systems

Regional Informational Meetings

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Revised March 20, 2013

UCAS

Utah Comprehensive Accountability System

SAGE

Student Assessment of Growth and Excellence

School Accountability/Assessment

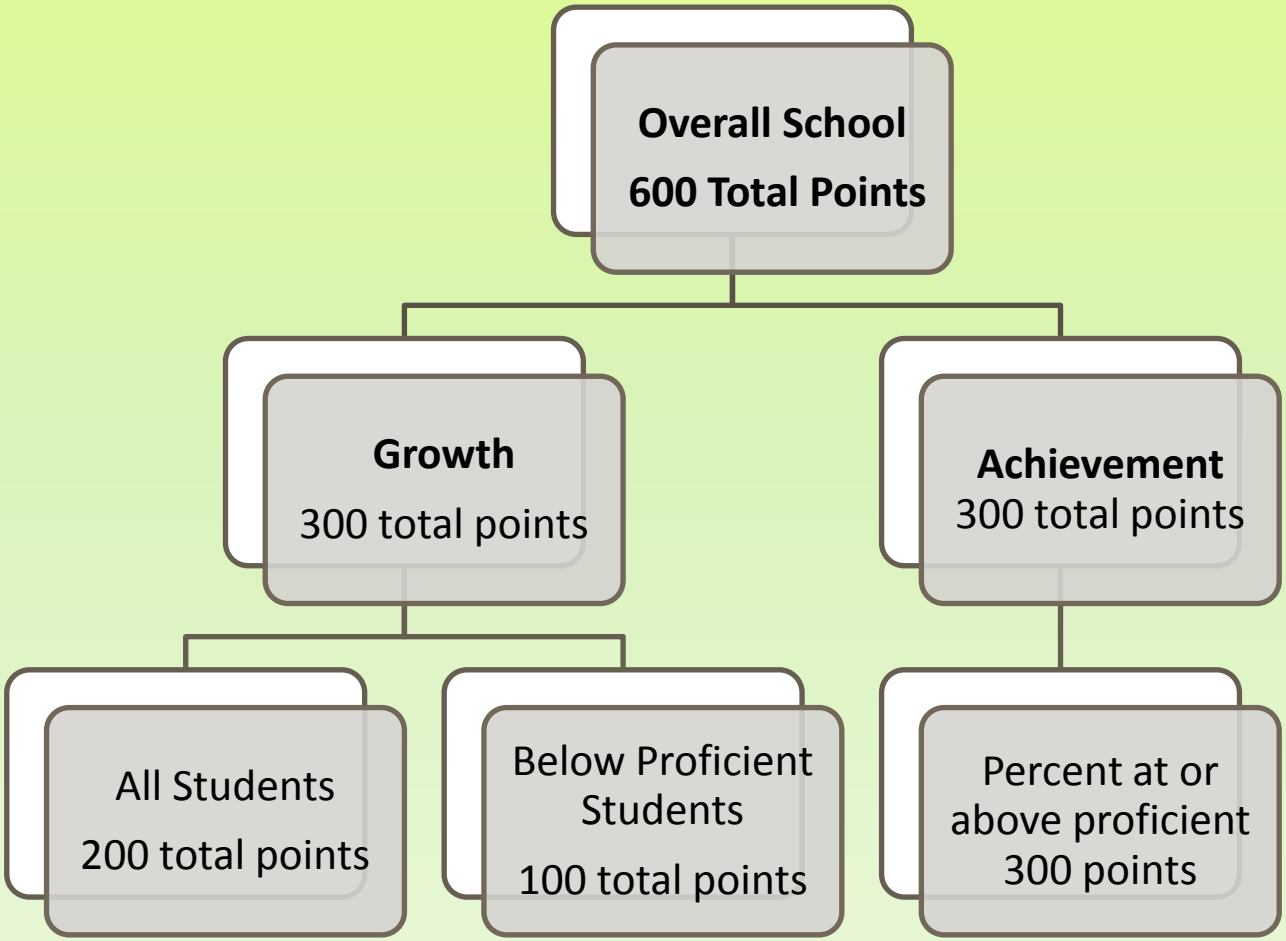
School Accountability

Calculations which render subjective judgments (UCAS)

Assessment

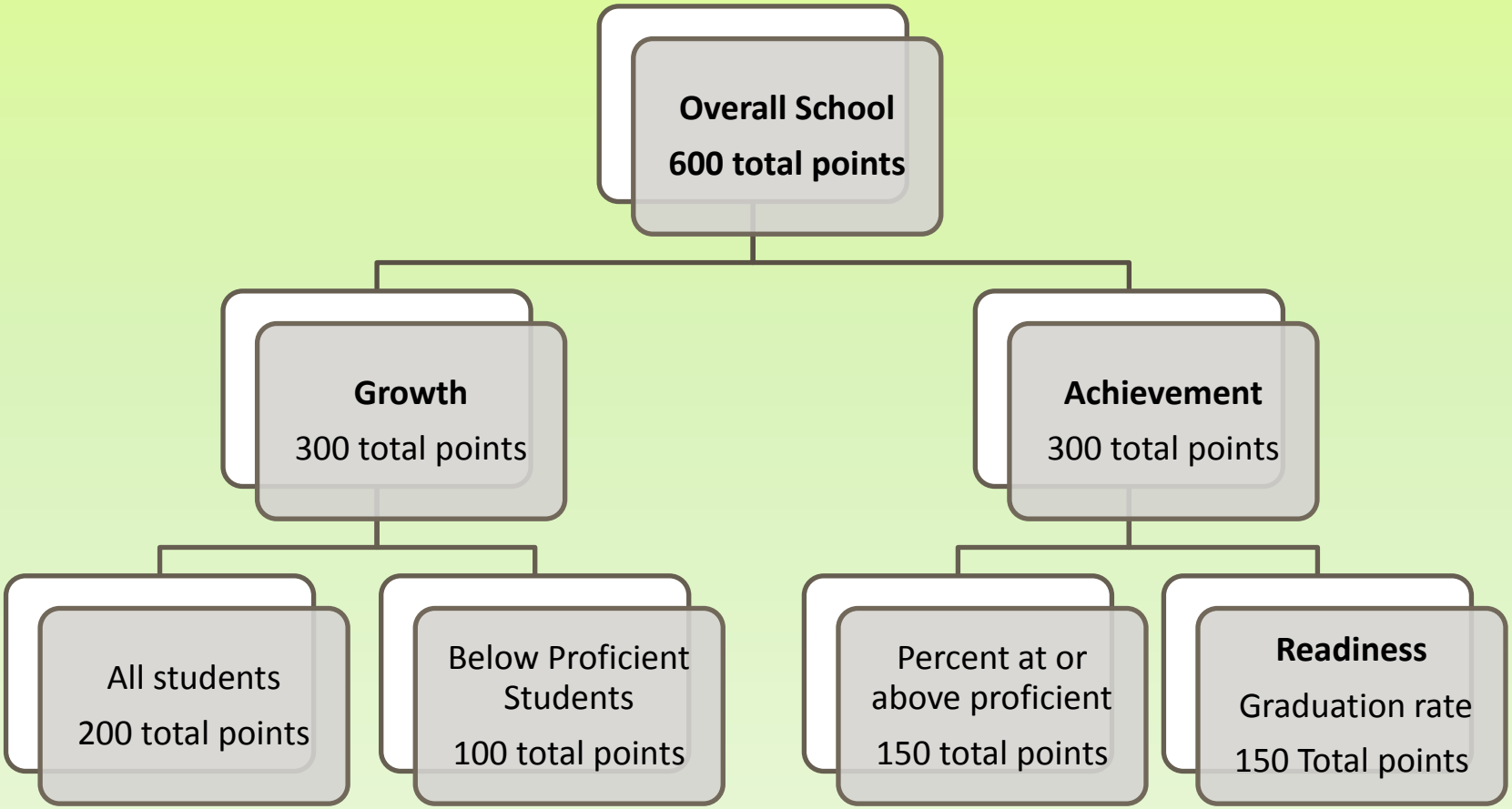
Individual measure of what students know and are able to do (SAGE)

Point Structure for Elementary and Middle Schools



Schools without a 12th grade

Point Structure for High Schools



Schools with a 12th grade

Student Assessment of Growth and Excellence

SAGE

Overview

- **Custom assessment and instructional support system**
  - Built with and for Utah
  - Designed to measure and support the teaching and learning of Utah Core Standards
- **The System**
  - Integrated Interim and Summative System
  - Formative System with instructional supports
  - Instant, detailed reporting

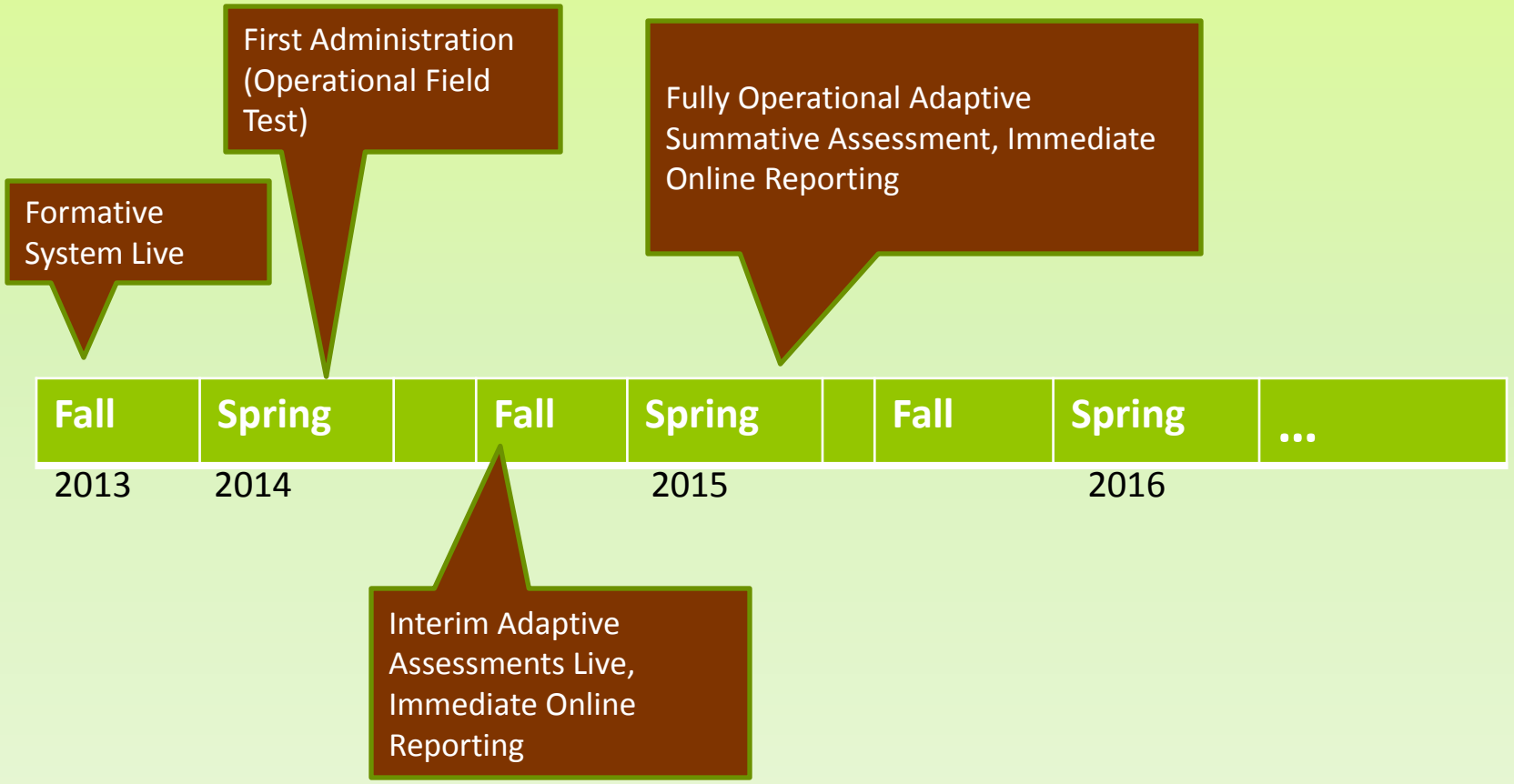
Interim and Summative System

What	Why
Standards-based	Measures the content that students are taught
Adaptive	Provides good measurement for all students, including those who struggle and those who excel
Accessible	Supports access and fair measurement for all students
Instant, detailed reporting	Gets actionable information to educators immediately
Link to formative resources	Offers tools to help educators target instruction

Formative System

- **Extends capabilities of UTIPS**
  - Utah was on the cutting edge of web-based educational resources.
  - UTIPS included state- and teacher-authored formative items.
- **Learning Point Navigator**
  - Offers multiple open-source libraries
  - Will include UTIPS libraries
  - Includes instructional resources as well as formative assessments

Timeline


First Administration (Operational Field Test)
Fully Operational Adaptive Summative Assessment, Immediate Online Reporting
Formative System Live
Fall
Spring
Fall
Spring
Fall
Spring
...
2013
2014
2015
2016
Interim Adaptive Assessments Live, Immediate Online Reporting

Who is AIR?

- Not-for-profit institution
- Organization founded after WWII
- Approximately 1,700 people working in assessment, education, health, and international development
- Statewide assessments in Ohio, Oregon, Hawaii, Delaware, Minnesota, South Carolina, and New Mexico

AIR Approach…Schools

Schools are for teaching students

Schools do not always have the newest computers

…or fastest networks

…or best technical support

…or any technical support

An online testing system must have a very small footprint

AIR Approach…Tests

Tests are for measuring what students know and can do

Bells and whistles can be fun and even powerful and helpful

or a **distraction**

Technology should create new measurement opportunities, not repackage selected response in many boxes

AIR Approach…Making Tests

Software developers are fantastic, but they should develop software, not test items.

Test items should be developed by educators and content experts.

AIR test developers have access to powerful tools they need to create innovative technology intensive items, without the help of software developers.

AIR Approach…Students

There are a lot of **students** out there, and each is unique

with individual **access needs** and ways of learning

We design tests from the ground up to be **accessible**, and to allow each student to show what they know and can do

and provide the **tools** that enable them to do so

The Test

What does the test look like?

- Standards-based adaptive assessment
- Scaled scores
- Proficiency levels (“passing scores”)
- Spring to Spring and Fall to Spring growth
- Helps all kids access the test (“accommodations”)
- It is made up test items (questions)

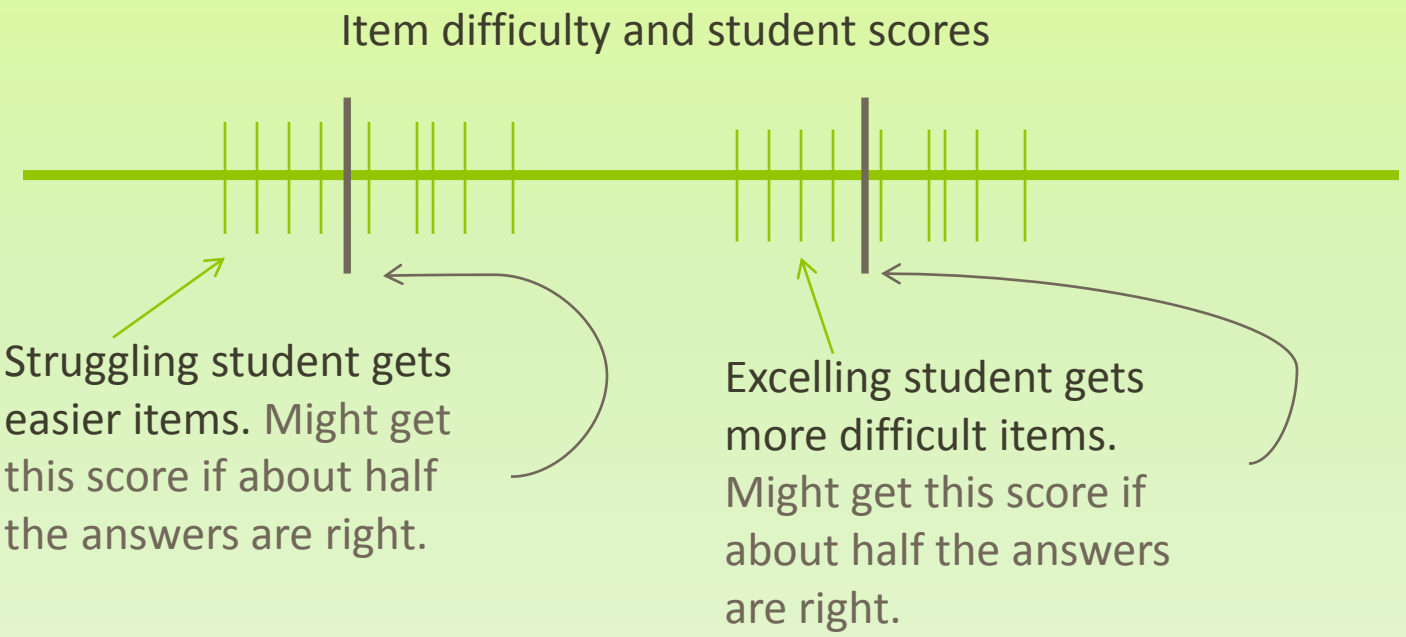
A Different Approach to Items

- **Most think about "item types"**
  - Hot spot
  - Drag and drop
  - Etc
- **We think of response mechanisms**
  - Graphic
  - Equation
  - Interaction
  - English language
- **We have the tools to create almost any item that a content specialist can imagine.**

Delivering State-of-the-Art, Statewide Adaptive Assessments

	Technology Enhanced	Machine-Scored Graphic Response	Machine-Scored Natural Language	Machine-Scored Simulations	Integrate Machine and Human Scoring
Delaware	✓	✓			✓
Hawaii	✓	✓	✓	✓	
Minnesota	✓	✓	✓	✓	✓
Oregon	✓	✓	✓		✓
Ohio (Pilot and Practice Test)	✓	✓	✓	✓	
Utah	✓	✓	✓	✓	

Background:
The General Idea Behind Adaptive Testing



Adaptive tests should be careful to measure the same content for all students.

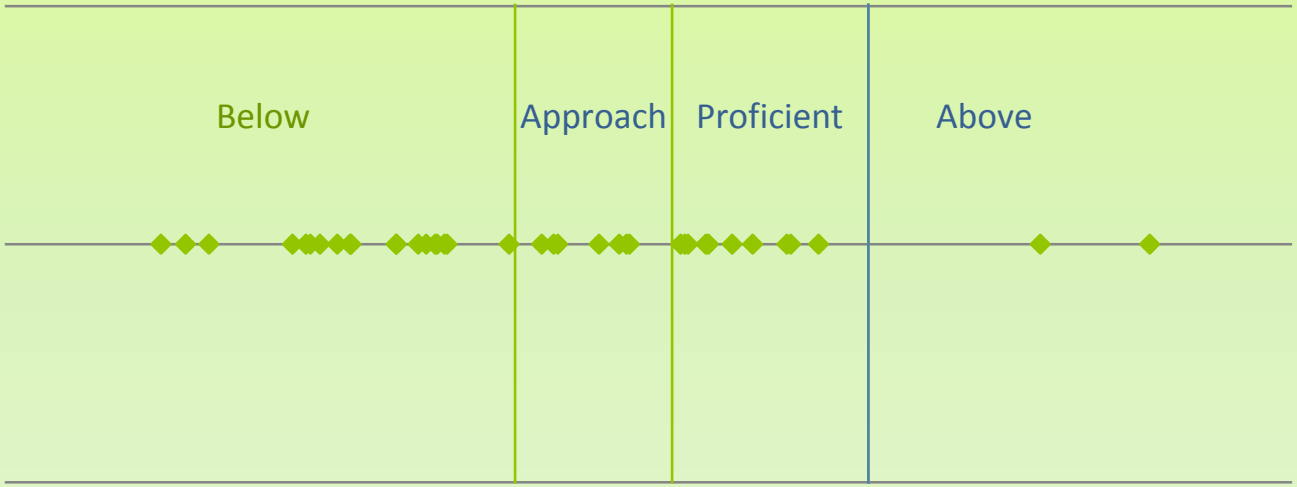
- Scores are not comparable if the content measured is not the same.
- If you measure different content for struggling students, teachers will teach different content to those students.
- If you measure different content for struggling students, accountability incentives could lock lower performing students into curricula that will not prepare them for college or careers.

Standards-based Adaptive Testing: Our Algorithm

- Specify the blueprint in terms of the minimum and maximum number of items:
  - On each strand, standard, benchmark, etc.
  - At each level of cognitive complexity
  - For each item type
  - *Anything else important that is known about the items*
- Every student is tested on the full range and depth of content, but at different levels of difficulty.
- Meets *all* the criteria outlined by the Consortium for Citizens with Disabilities (CCD).

What about kids above or below grade level?

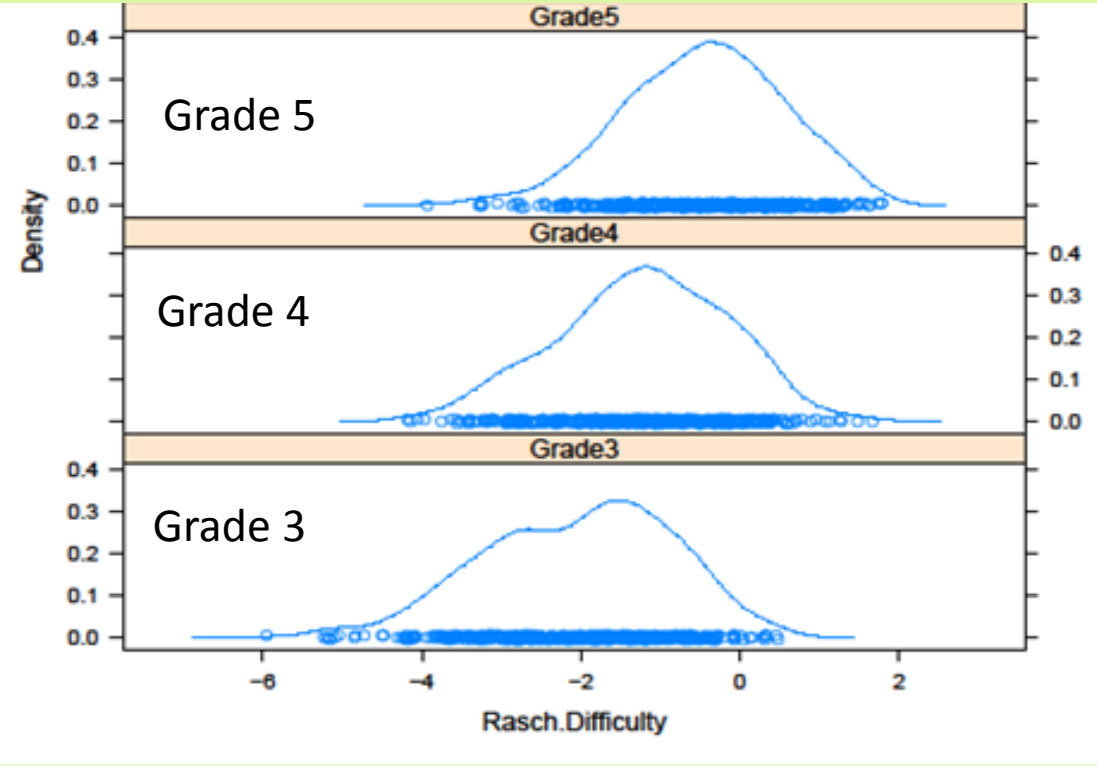
Difficulty of items measuring Minnesota Math Standards 8.2.3.1: *Evaluate algebraic expressions, including expressions containing radicals and absolute values, at specified values of their variables.*



On-grade content can cover a very wide range of performance.

Broad On-Grade Difficulty Ranges

Distribution of item difficulty by grade



Access for All Students

Feature	Description	Availability
Text-to-Speech	Allows text-based content to be presented in spoken form	All
Magnification	Magnifies a selected portion of an item	All
Increased Font Size	Allows students to increase the size of alphanumeric content and images	All
Highlighter	Allows text to be highlighted	All
Answer Eliminator	Allows students to strike out answers they have eliminated as possible correct answers	All
Keyboard Navigation	Allows a student to navigate and interact with the system using the Tab/Enter keys and/or equivalent on an alternative/assistive communication device	All

Access for All Students

Feature	Description	Availability
Reverse Contrast	Reverses the colors used to display text and graphics and the background on which text and graphics are displayed	All
Alternate Text and Background Colors	Changes the color used to display text and graphics and the color used for the background on which text and graphics are displayed	All
Line Reader	Provides focus on a single line of text that can be moved up or down within a block of text	All
Masking	Blocks a portion of the display area in order to provide focus on the un-masked area	All
Breaks	Allows a student to take one or more breaks during the administration of the assessment	All
Speech-to-Text	Allows spoken content to be presented in text-based form	All

Access for All Students

Feature	Description	Availability
Text-to-Braille	A refreshable Braille display that presents content in Braille on a device controlled by the student	Students with Disabilities
Tactile Graphics	Prints tactile representations of graphics using an external embosser printer	Students with Disabilities
Signing Type	Allows human video of ASL interpretation of text that appears in the test	Students with Disabilities

What about the passing score?

- Typically, the passing score is set (approved) by the Board.
- Standard-setting process:
  - Broad range of stakeholders
  - “Ordered Item Booklet”
  - Impact data, potentially including national and international benchmarks
  - Resolution process to ensure consistency across grades
- Process yields recommendations to the Board.

Compatibility With District Technology

Small Footprint

- Low bandwidth demand
- Support for computers and operating systems for 10 years
- No caching servers, special hardware or software, other than secure browser (no need for personnel to be tech-savvy to download the Secure Browser)

Support for Oldest Devices Across 3 Platforms

- **Windows**
  - XP (12 years old)
- **Mac OSX 10.4 (7 years old)**
- **Linux**
  - K12LTSP 4.0 (8 years old)
  - Ubuntu 9 (3 years old)

Support for Newest Devices

- **iPad, Android support**
  - Building Secure Browser for iPad, Android scheduled for release in January, 2013.
- **Chromebook support**
  - Google is partnering with AIR to make Chromebooks secure and compatible with system by January, 2013.

Reporting
Tools for Teaching and Learning

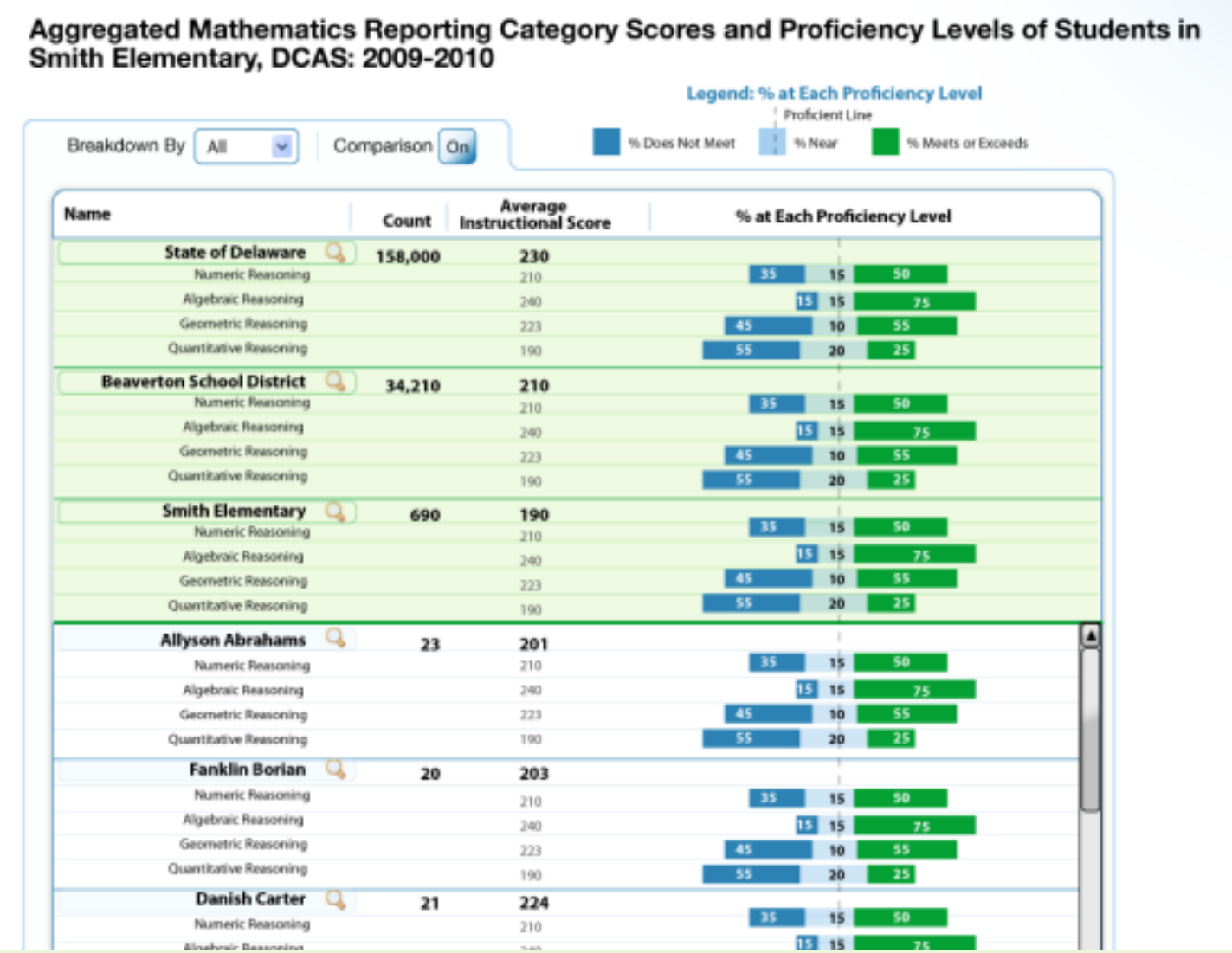
Reporting

- SAGE Reporting System will extend current system
  - Gateway – Public Reporting
  - Data Display – Password protected data for Educator use
  - Student Reports – SGP profile, CRT
- Avoid duplication while expanding access to data

Use the data. Know its limits.

- What can you know about a student in an hour?
- The reliability of information (how much you can count on it) increases with:
  - more items, and
  - more students.
- Good information about fine-grained content at the class level, but less reliable for individuals
- SAGE Formative provides online instructional materials and targeted quizzes:
  - Integrates instruction and assessment
  - Provides individual student-level information at a fine instructional level

Reporting Category Level Data



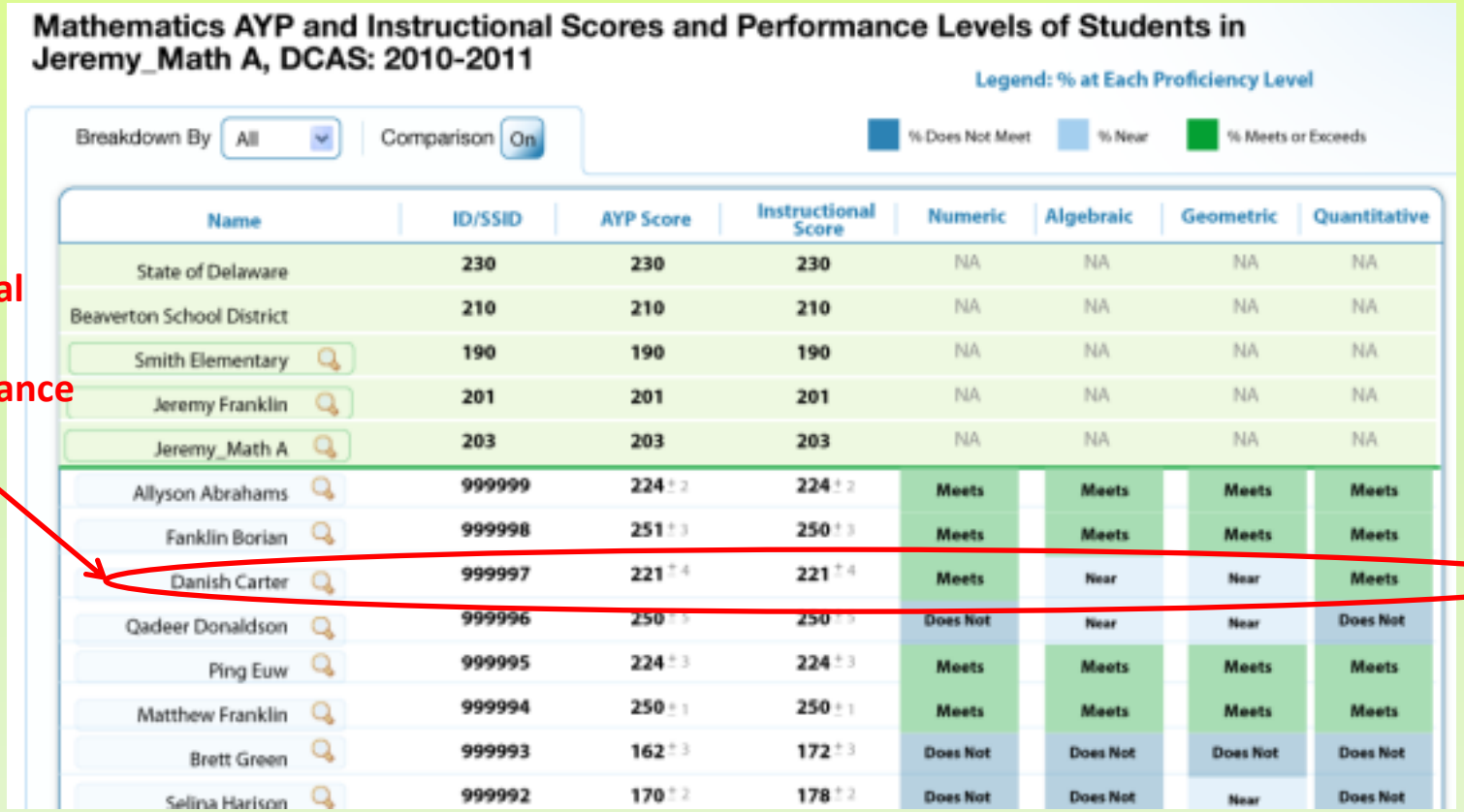
Aggregated Mathematics Reporting Category Scores and Proficiency Levels of Students in Smith Elementary, DCAS: 2009-2010

Legend: % at Each Proficiency Level — Proficient Line — % Does Not Meet — % Near — % Meets or Exceeds

Breakdown By: All | Comparison: On

Name	Count	Average Instructional Score	% at Each Proficiency Level
State of Delaware	158,000	230	
Numeric Reasoning		210	35 / 15 / 50
Algebraic Reasoning		240	15 / 15 / 75
Geometric Reasoning		223	45 / 10 / 55
Quantitative Reasoning		190	55 / 20 / 25
Beaverton School District	34,210	210	
Numeric Reasoning		210	35 / 15 / 50
Algebraic Reasoning		240	15 / 15 / 75
Geometric Reasoning		223	45 / 10 / 55
Quantitative Reasoning		190	55 / 20 / 25
Smith Elementary	690	190	
Numeric Reasoning		210	35 / 15 / 50
Algebraic Reasoning		240	15 / 15 / 75
Geometric Reasoning		223	45 / 10 / 55
Quantitative Reasoning		190	55 / 20 / 25
Allyson Abrahams	23	201	
Numeric Reasoning		210	35 / 15 / 50
Algebraic Reasoning		240	15 / 15 / 75
Geometric Reasoning		223	45 / 10 / 55
Quantitative Reasoning		190	55 / 20 / 25
Fanklin Borian	20	203	
Numeric Reasoning		210	35 / 15 / 50
Algebraic Reasoning		240	15 / 15 / 75
Geometric Reasoning		223	45 / 10 / 55
Quantitative Reasoning		190	55 / 20 / 25
Danish Carter	21	224	
Numeric Reasoning		210	35 / 15 / 50
Algebraic Reasoning		240	15 / 15 / 75

Roster of Students



Mathematics AYP and Instructional Scores and Performance Levels of Students in Jeremy_Math A, DCAS: 2010-2011

Legend: % at Each Proficiency Level

Breakdown By: All | Comparison: On

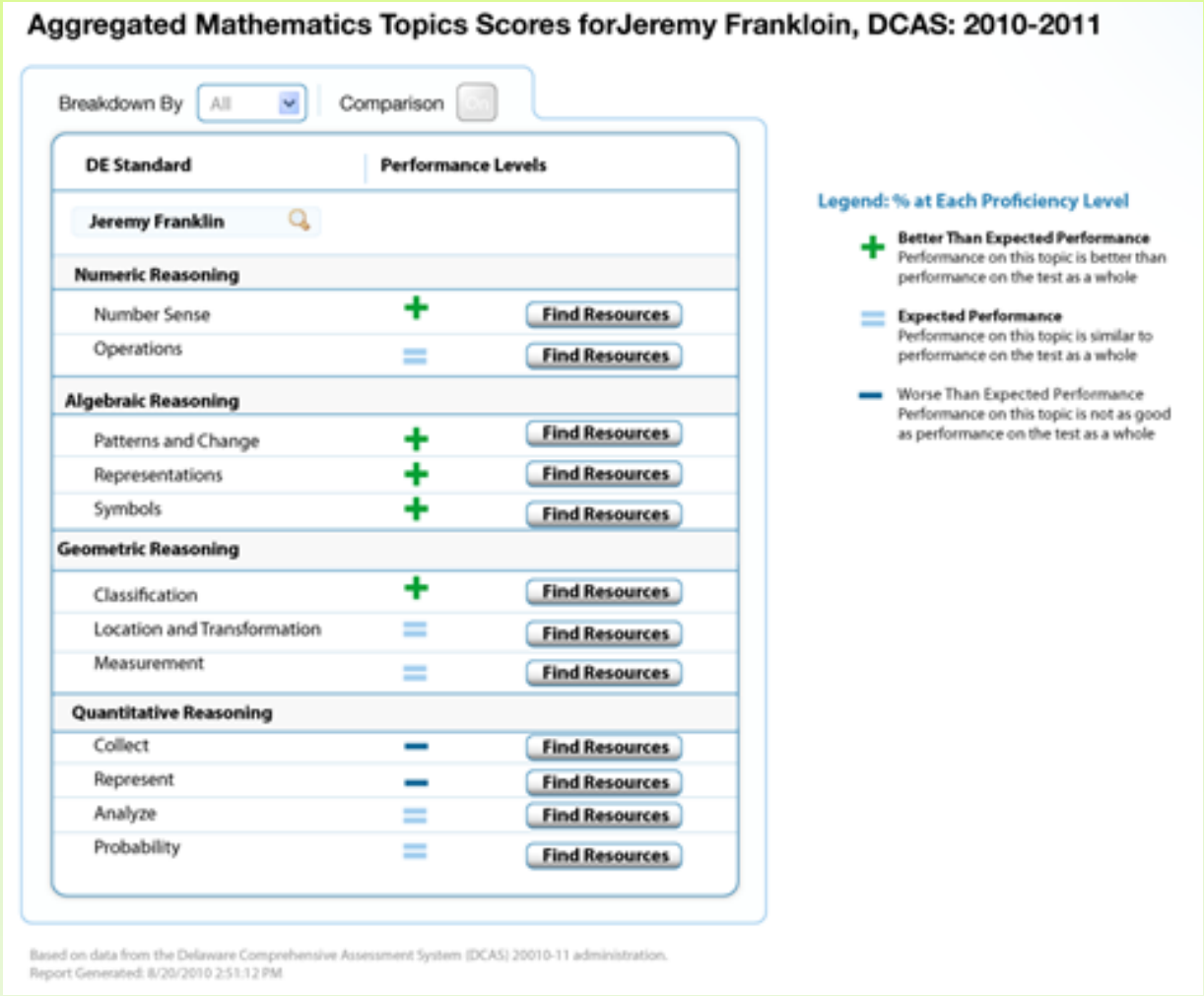
% Does Not Meet | % Near | % Meets or Exceeds

Name	ID/SSID	AYP Score	Instructional Score	Numeric	Algebraic	Geometric	Quantitative
State of Delaware	230	230	230	NA	NA	NA	NA
Beaverton School District	210	210	210	NA	NA	NA	NA
Smith Elementary	190	190	190	NA	NA	NA	NA
Jeremy Franklin	201	201	201	NA	NA	NA	NA
Jeremy_Math A	203	203	203	NA	NA	NA	NA
Allyson Abrahams	999999	224 ± 2	224 ± 2	Meets	Meets	Meets	Meets
Fanklin Borian	999998	251 ± 3	250 ± 3	Meets	Meets	Meets	Meets
Danish Carter	999997	221 ± 4	221 ± 4	Meets	Near	Near	Meets
Qadeer Donaldson	999996	250 ± 5	250 ± 5	Does Not	Near	Near	Does Not
Ping Euw	999995	224 ± 3	224 ± 3	Meets	Meets	Meets	Meets
Matthew Franklin	999994	250 ± 1	250 ± 1	Meets	Meets	Meets	Meets
Brett Green	999993	162 ± 3	172 ± 3	Does Not	Does Not	Does Not	Does Not
Selina Harison	999992	170 ± 2	178 ± 2	Does Not	Does Not	Near	Does Not

Individual Student Performance

Student Trend

What do I do tomorrow?



Aggregated Mathematics Topics Scores forJeremy Frankloin, DCAS: 2010-2011

Breakdown By: All | Comparison: On

DE Standard	Performance Levels	
Jeremy Franklin		
Numeric Reasoning		
Number Sense	+	Find Resources
Operations	=	Find Resources
Algebraic Reasoning		
Patterns and Change	+	Find Resources
Representations	+	Find Resources
Symbols	+	Find Resources
Geometric Reasoning		
Classification	+	Find Resources
Location and Transformation	=	Find Resources
Measurement	=	Find Resources
Quantitative Reasoning		
Collect	−	Find Resources
Represent	−	Find Resources
Analyze	=	Find Resources
Probability	=	Find Resources

Legend: % at Each Proficiency Level

+ **Better Than Expected Performance**
Performance on this topic is better than performance on the test as a whole

= **Expected Performance**
Performance on this topic is similar to performance on the test as a whole

− Worse Than Expected Performance
Performance on this topic is not as good as performance on the test as a whole

Based on data from the Delaware Comprehensive Assessment System (DCAS) 20010-11 administration.
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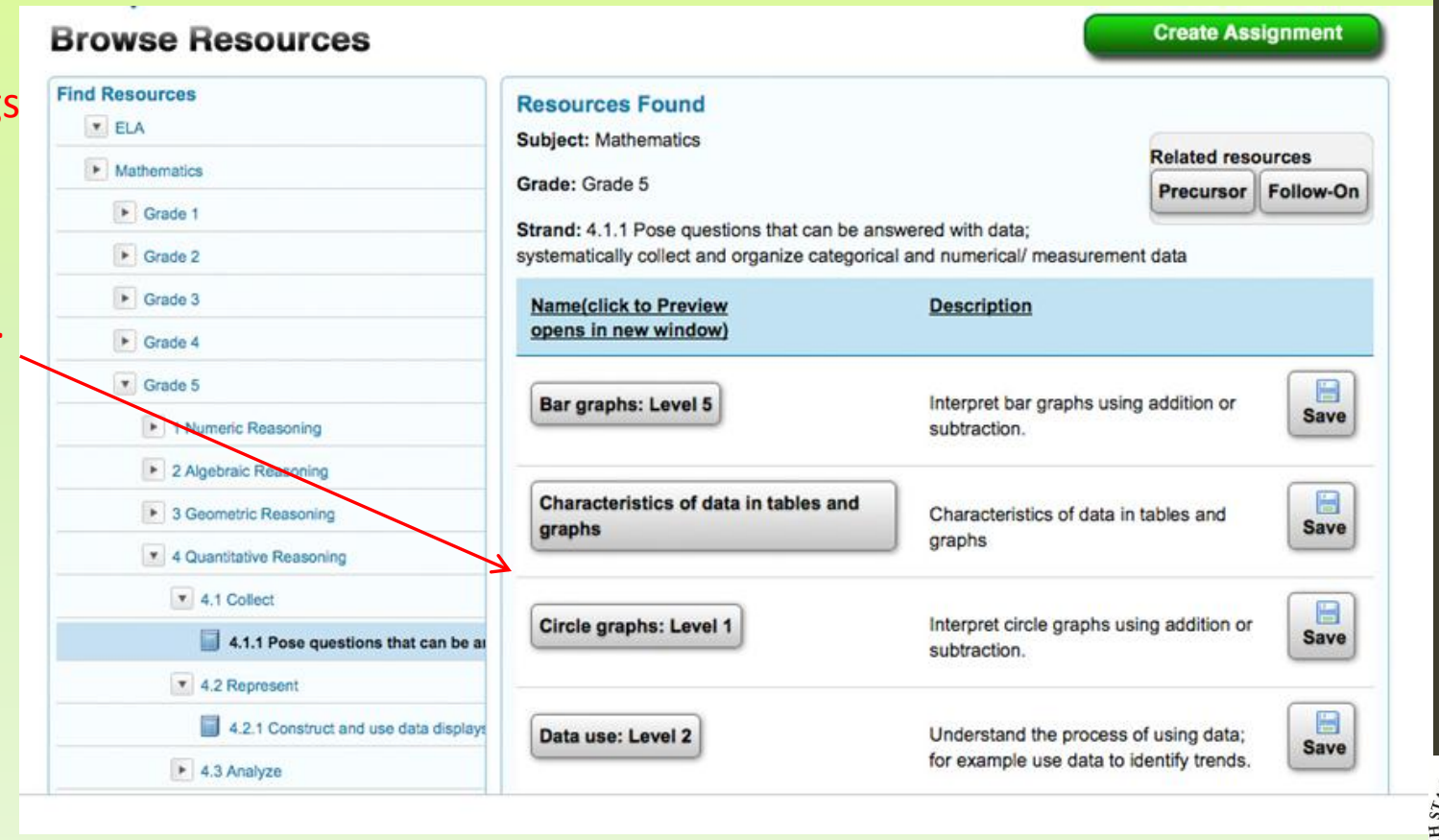
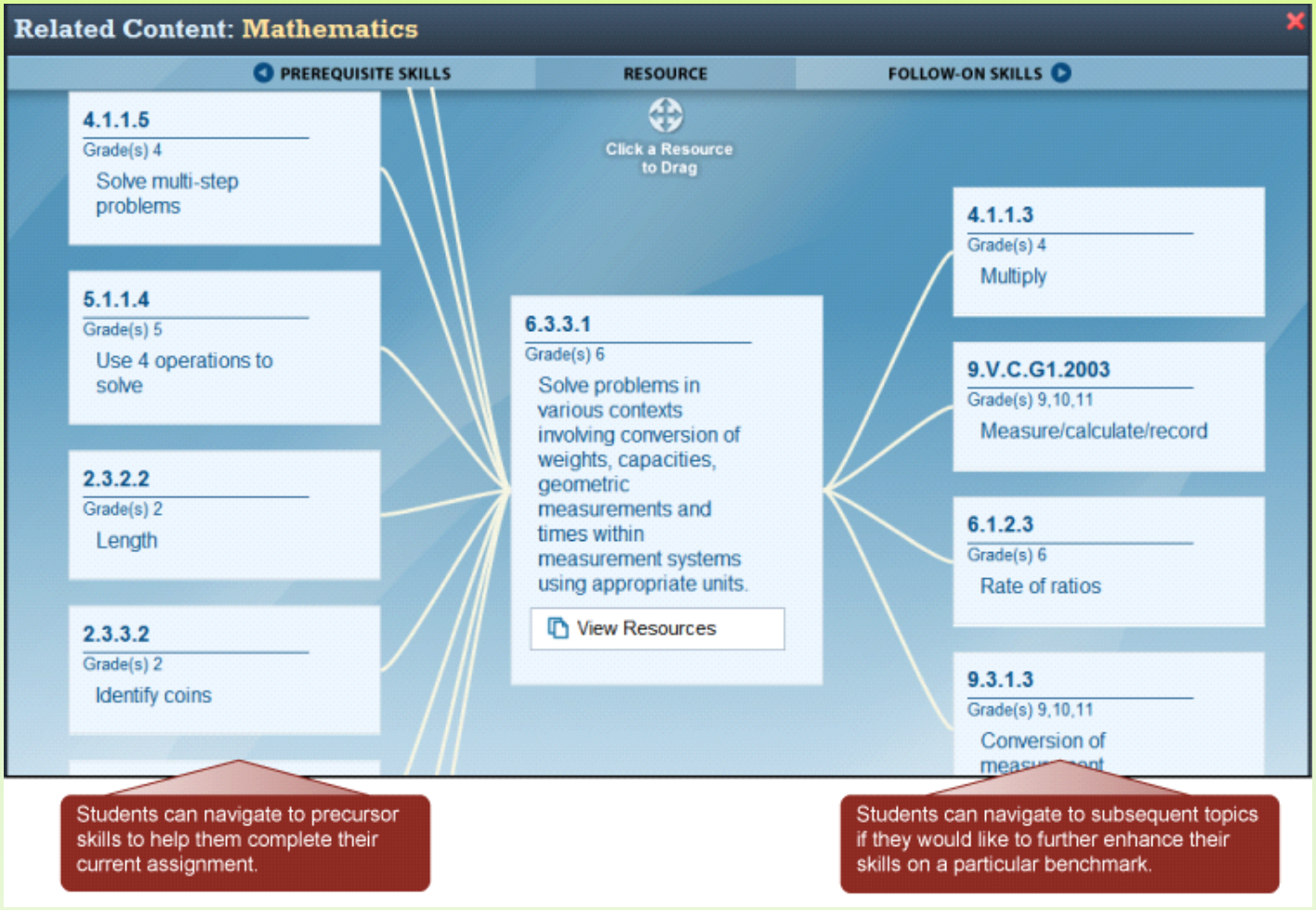
Reporting System Links Directly to Formative System

System brings teachers to the list of related assignments.



Students and Teachers Find Related Resources



Timely and Customized Instruction

Traditionally, educators and parents get their student reports months after the test has been taken by the student.

Student submits a test

In milliseconds

Quality Monitor System

Performs real-time validation and maintains statistics to monitor item and other systems test performance

In milliseconds

Reporting System

Gives educators immediate access to standards and benchmark performance about their students

Navigator

Use formative assessment activities to assign relevant activities to students and identify individual learning needs

Some test items…

Demonstration

SAGE Communications

Weekly Update Memo

Webinar March 6
Recording at : http://www.schools.utah.gov/assessment/Adaptive-Assessment-System.aspx

- Development Timeline Update
- Blueprint Review
- Item Demonstration

Webinar April 3 [2 pm] http://connect.schools.utah.gov/aau

- SAGE Formative Overview
- New Item Types

Webinar April 3 [2 pm] http://connect.schools.utah.gov/aau

Webinar June 5 [2 pm] http://connect.schools.utah.gov/aau

All webinars are recorded and posted to the following website:
http://www.schools.utah.gov/assessment/Adaptive-Assessment-System.aspx

Summary

- **Standards-based adaptive assessment**
  - Provides good measurement for all students
  - Brings the right assessments into the classroom
- **Accessible for All**
  - Embedded supports and accommodations to test every student fairly
- **Immediate reporting**
  - Actionable data to support instruction
- **Immediate links to formative material**
  - Classroom activities and formative assessments to evaluate individual needs

Questions / Comments

http://Demo.TDS.airast.org/AIRAssessment